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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,066	06/24/2002	Dennis Chancellor	215/955-US1	8640

34284 7590 01/07/2004

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EXAMINER	
MENON, KRISHNAN S	

ART UNIT	PAPER NUMBER
1723	

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/019,066	CHANCELLOR ET AL.	
	Examiner	Art Unit	
	Krishnan S Menon	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- *Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).*
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 6-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 6-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claims 1-3 and 6-18 are pending. Claims 4 and 5 were cancelled by a preliminary amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites 'a downstream inlet' in the 6th line and in the last line. It is unclear if these two represent the same inlet or different inlets. It is assumed to be the same inlet for examination purpose.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 6-10 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Call (US 4,083,780).

Claims 1 and 17: Call teaches a filtration systems comprising a plurality of inner lumens (figure 1) in an outer lumen; inner lumen having plurality of filter elements (14 a-

d), with feed flow to the upstream filter, feed exiting from the upstream filter mixed with fresh feed entering the down-stream filter (col 4 lines 39-61; when brine seal is omitted, part of the feed would by-pass the upstream filter and would be mixed with the waste stream of the upstream filter to become feed for the downstream filter).

Call does not teach any specific structure for the down-stream inlet, positioned downstream of the upstream element and upstream of the downstream element, other than the feed by-pass around the brine seal (or due to the lack of a brine seal) as in claim 1; and additional feed fluid entering the inner lumen at a point between the upstream and downstream filters as in claim 17. However, these are equivalent to what is provided by Call as the feed bypass around the brine seal. In this case, the prior art element: (A) performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding element disclosed in the specification. Kemco Sales, Inc. v. Control Papers Co., 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000) (B) is not excluded by any explicit definition provided in the specification for an equivalent. A person of ordinary skill in the art would have recognized the interchangeability of the element shown in the prior art for the corresponding element disclosed in the specification. Caterpillar Inc. v. Deere & Co., 224 F.3d 1374, 56 USPQ2d 1305 (Fed. Cir. 2000); Al-Site Corp. v. VSI Int ' l, Inc., 174 F.3d 1308, 1316, 50 USPQ2d 1161, 1165 (Fed. Cir. 1999); Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus. Inc., 145 F.3d 1303, 1309, 46 USPQ2d 1752, 1757 (Fed. Cir. 1998); Lockheed Aircraft Corp. v. United States , 193 USPQ 449, 461 (Ct. Cl.

1977); Data Line Corp. v. Micro Technologies, Inc., 813 F.2d 1196, 1 USPQ2d 2052 (Fed. Cir. 1987).

Call teaches manifolds for coupling the inner lumens and the cores of the inner casings as in claim 6 (see figures); manifolds extend form the same ends as in claim 7 (figures); continuous core space through which permeate flows as in claim 8 ((12 – fig 1); serial disposition of the filter in inner casing with continuous annuls as in claim 9 (fig 1); spiral wound as in claim 10 (fig 2; col 3 lines 60-65); disposed above ground as in claim 13 (no teaching in the ref as to other than being above ground; implicit disclosure: "[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968); In re Lamberti, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976)); coupling/filter ratio < ¼ as in claims 14-16 (plurality of elements in claim 1 of the reference and fig 1). Re claim 18, the feed fluid distribution between the upstream and downstream inlets is a variable that can be optimized to have the desired pressure drop in the elements/system (Discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Aller, 42 CCPA 824, 220 F.2d 454, 105 USPQ 233 (1955).)

2. Claims 2,3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Call (US 4,083,780) in view of Eckman (US 5,470,469).

Eckman teaches all the limitations of claim 1. Claims 2,3 and 11 add further limitations of pressure reducing orifice with 50-70% of the feed entering the upstream filter, max pressure drop 20%, and hollow fiber elements. Eckman teaches the orifice for limiting pressure drop and hollow fiber elements (abstract; 48-fig 2; col 5 lines 5-10; 39-50). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Eckman in the teaching of Call for the orifice for properly adjusting the feed by-pass (Eckman col 5 lines 39-50) and for hollow fiber elements to overcome the draw-backs of the spiral wound (col 3 lines 60-67; col 6 lines 25-40). Re the 50-70% feed entering the upstream filter, process flow optimization for pressure drop, etc. (In re Boesch and Slaney)

3. Claims 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Call (US 4,083,780) in view of Oklejas et al (US 4,983,305).

Call teaches all the limitations of claim 1. Claim 12 adds further limitation of an energy recovery device, which is not taught by Call, but taught by Oklejas (abstract, figures). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Oklejas in the teaching of Call to have an energy recovery pump as taught by Oklejas to recover the energy from the waste stream (abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Krishnan Menon
Patent Examiner

W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700